25X1

PAR 214

29 Feb 64

SUBJECT: Roller Transport Reversal Processor (12 Inch)

TASK/PROBLEM

Design and fabricate a versatile self-threading photographic processor capable of handling both cut sheets and continuous webs of photographic material and adaptable to a process yielding either standard negative or reversal images. Interchange between processes to be accomplished with the minimum amount of effort.

DISCUSSION

Approval to proceed with PAR 214 was received by message 0886 dated 10 Feb 64. Upon receipt of approval, specification number 203 was revised incorporating changes requested. The revised specification 203-A is attached for information purposes. A revised cost estimate has been completed and will be submitted to the contracting officier under separate cover for approval. Basic data preparatory to starting design layout has been collected.

PLANNED ACTIVITIES

Preliminary design and layout is scheduled to start on/or about 16 Mar 64. Target date for completion is on/or about 15 June 64. Detailed design of some machine parts should be underway by 15 May 64.

Final design of the reversal section will be delayed only long enough to obtain firm process specifications from the tests and evaluation study being conducted under PAR 206.

Attachment Spec No. 203-A

Spec No. 203-A

Date 29 Feb 64

SPECIFICATION FOR ROLLER TRANSPORT PROCESSOR (12 INCH)

TASK/PROBLEM

Design and fabricate a versatile, self-threading photographic processor capable of processing both sheets and continuous strips of film to either standard negative or reversal images. Changes from one process to the other accomplished with a minimum of operator effort.

PROCESSING METHOD

Roller transport conveyance through deep tanks. Agitation accomplished by action of the conveying rollers.

MATERIAL CAPABILITIES

Film Size
Cut Sheet - Minimum - 4 x 5 inches
Maximum - 11 x 14 inches

Note: Cut sheet films must be packaged and shipped in cut sheet form, not cut from roll stock.

Continuous Strip
Minimum - 16mm
Maximum - 9½" x 1000 feet

Material
Certain types of black-and-white aerial and commercial films.

Note: It should be recognized that with roller transport equipment, some of the thinner base materials may require a pilot tab at the leading edge in order to be self-threading.

Output Rates (Approximate)
Print Material - Negative - 15 ft/min
- Reversal - 10 ft/min

Original Material - Negative - 8 ft/min
Reversal - 5 ft/min

PROCESS TIME

Dry to Dry - Negative - 5 min
Reversal - 7 min

Original Material - Negative - 9 min
Reversal - 14 min

PRODUCT QUALITY

Negative - Archival (indefinite keeping)
Reversal - Good commercial quality (approximately 5 years)

PROCESS TEMPERATURE

70°F to 110°F

REVERSAL CAPABILITY

Equipment to be capable of reversal image exposure by both chemical fogging and/or white light flashing.

OPERATION

Processor to be capable of daylight operation for all continuous strip materials up to the capacity of the USAF, A-9 Film Magazine.

Feed of all cut sheet materials into the processor will be accomplished under normal dark room operation.

PHYSICAL DIMENSIONS

Overall Dimensions (approximate)

Length - 13 feet, 6 inches
Width - 40 inches
Height - 45 inches
Weight - 2,000 pounds

SERVICE REQUIREMENTS

Power - 120/208 volt, 3 phase, 4 wire 60 cycle a.c. can be converted to 230 volt, 3 phase, 3 wire or 230 volt single phase, 3 wire, 12 to 15 kilowatts.

SERVICE REQUIREMENTS (continued)

Water - Hot (150°F) and cold (60°F) Max.) service to operating area at 45 psi minimum.

Total consumption 6 to 8 gallons per minute controlled to ±½°F. Mixing and control equipment provided with processor.

Air - 25 psi instrument air.

Sewer - 4-inch Duriron service line.